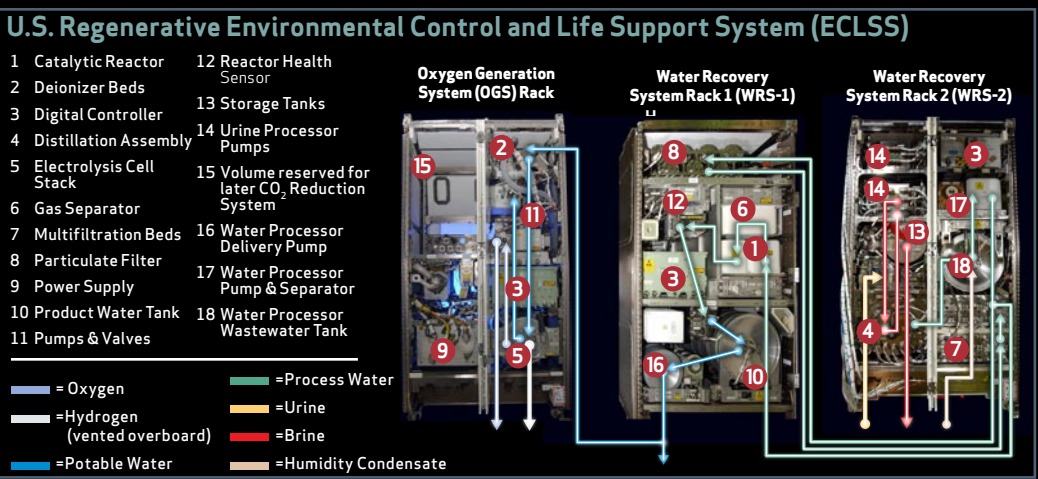
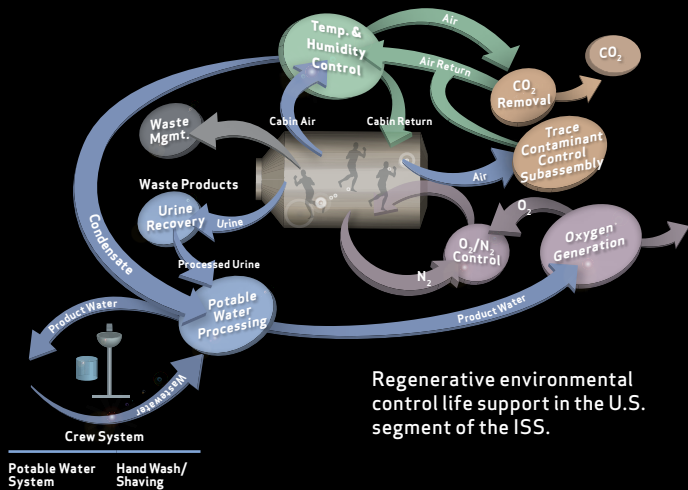
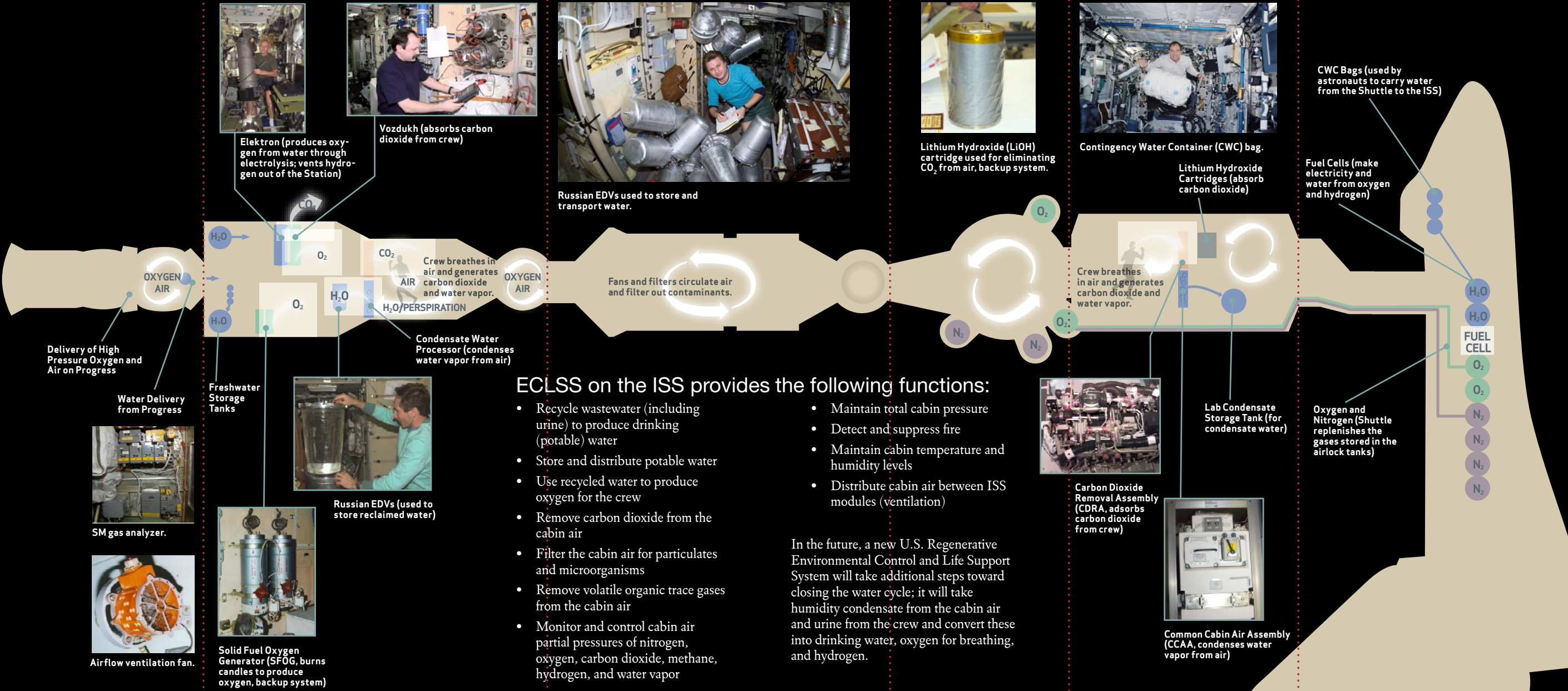


Environmental Control and Life Support System (ECLSS)

Earth's natural life-support system provides the air we breathe, the water we drink, and other conditions that support life. For people to live in space, however, these functions must be performed by artificial means. The ECLSS includes compact and powerful systems that provide the crew with a comfortable environment in which to live and work.



progress service module fgb node/airlock u.s. lab shuttle



ECLSS on the ISS provides the following functions:

- Recycle wastewater (including urine) to produce drinking (potable) water
 - Store and distribute potable water
 - Use recycled water to produce oxygen for the crew
 - Remove carbon dioxide from the cabin air
 - Filter the cabin air for particulates and microorganisms
 - Remove volatile organic trace gases from the cabin air
 - Monitor and control cabin air partial pressures of nitrogen, oxygen, carbon dioxide, methane, hydrogen, and water vapor
 - Maintain total cabin pressure
 - Detect and suppress fire
 - Maintain cabin temperature and humidity levels
 - Distribute cabin air between ISS modules (ventilation)
- In the future, a new U.S. Regenerative Environmental Control and Life Support System will take additional steps toward closing the water cycle; it will take humidity condensate from the cabin air and urine from the crew and convert these into drinking water, oxygen for breathing, and hydrogen.